1938-1952

Index

OF VOLUMES III-XVII (Supersedes Index Vol. I-XV)

PAGE

INDEX OF TITLES 2
SUBJECT INDEX 6
INDEX OF AUTHORS 12

25R6075G

INDEX OF TITLES

Issue Page

A

A Million Breaks (Trans. Tap Changer) by A. H. Baguhn and G. W. Lengnick....3Q51 14
Adjusting Vertical Thrust Bearings by J. E. Petermann....4Q51 30
Aerial Photography Trick Simplifies Switchgear Installation Engineering by T. G. A. Sillers.. S44 11
After Graduation, Opportunity by F. Jeffrey..4Q48 4
Air Blast Circuit Breakers by W. S. Edsall....M39 23
Air-Cooled Transformers Withstand Switchgear Impulse Tests by Albert Ewy....4Q52 31
Align Shafts, Not Couplings by W. F. King and J. E. Petermann....2Q51 26
Analogies and Energies by D. Journeaux....1Q52 30
Analogies in AC Circuit Interruption by Dr. Erwin Salzer....2Q52 26
Angular Displacement in 3-Phase Transformer Banks by G. W. Clothier.... J39 32
Application of Synchronous Motors to High Inertia Loads by F. K. Brainard.... S39 31
Are You Getting Full Patent Protection? by D. Journeaux....M43 26

B

Ball and Rod Mills and Their Motor Drives by E. F. Stemmler....M39 20
Basic Rules for Protecting Relaying by H. V. Nye....2Q51 20
Beating Black-Outs by W. G. Kelley.... J40 5
Bigger and Better by S. H. Mortensen.... S41 4
"Big Inch" Oil — Under Control by A. S. Munneke and Jack I. Gates....M44 5
"Big Red" by W. B. Hibbard....D40 5
Birth of the Oil Circuit Breaker by Leonard L. Elden....M43 5
Blowing Transformer Ratings Upward by K. P. Wiederkehr....S42 20
Building the 300,000,000-Volt Betatron by J. W. Becker and B. F. Ureda....2Q50 4
Burbank's Sunshine Power Plant by J. H. McCambridge....D45 14
Brazing with Silver Alloys by J. E. Petermann and E. H. Fredrick....D43 20
"Breaker Operation, Please" by P. L. Taylor.. S41 28
Bucking the Storm by I. W. Collins.... S38 5
Building Blocks of Marine Power by H. Oman....2-3Q46 29

C

Calculating Transformer Rise for Various Loads by E. M. Leonard....1Q48 16
Can You Keep a Secret? by D. Journeaux....D40 25
Care of AC Rotating Equipment by F. Jeffrey —
Part I....1Q49 13
Part II....2Q49 20
Part III....3Q49 18
Part IV....4Q49 30
Changing Taps Under Load on Transformers..D38 17
Changing Taps Under Load by L. W. Schoenig....4Q48 8
Check Your Oil, Sir? by J. I. Onarheim....M40 31
Check That Ground by R. Loewe....2Q48 26
Choose Your Control Power Source by D. Dalasta....3Q48 9
Circle Diagram and the Induction Motor, The, by F. Jeffrey —
Part I....S39 5
Part II....D39 29
Circuit Breaker Ratings.... J38 17
Closed Delta Operation of Single-Phase Step Type Regulators by C. W. Nielsen....3Q52 25
Cold Day—Overload Transformers? by W. C. Sealey....S43 26
Compact Breaker with Big Capacity by P. L. Taylor and A. C. Kelle....D43 24
Coordinated Insulation — New Transformer Milestone by S. L. Foster....1Q49 4
Coordinating Controller and Breaker Ratings by T. H. Bloodworth and T. B. Montgomery..2Q50 18
Corona — Another Transformer "Has-Been" by L. C. Aicher....4Q50 13
Correcting Errors in 3-Phase Power Measurement by D. R. Laib....1Q49 20

D

D-C Rotary Drilling Rig, The, by E. F. Boening and M. Gay....4Q47 4
Design of Work Coils by B. E. Griffith, Jr. and R. Skiba —
Part I....4Q47 21
Part II....2Q48 11
Designing Special Slide Rules by R. C. Odell....M43 31
Do It with Synchronous Motors by C. D. Lawton....D42 15
Do You Know Your Own Invention? by D. Journeaux....3Q47 18
"Dog Tags" for Industry's Product Army by D. Journeaux.... S44 15
Don't Lose Your Bearings! by G. L. Ringland.. D44 30
Don't Overlook Silicone Insulation by J. L. Kuehlthau....1Q48 22
Double-Ended Substations . . . Economy or Luxury? by J. V. McGuire....2Q52 10
Driving the World's Largest Water Tunnel by E. F. Boening and F. M. Scott....2Q50 10
Dynamic Performance of Synchronous Generator Voltage Regulators by H. W. Cory and W. F. Eagan....3Q52 10
Dynamometer Tests Jet Engines (24,000-hp) by M. Gay, W. F. King and D. Dalasta....1Q51 23

E

Eclipse Reveals Solar Secrets by J. T. Wilson.. S45 4
Economics of Electric Power Pumping by C. A. Richardson.... J44 20
Electric Means for Measuring Low Pressures in Mercury Arc Rectifiers.... J39 11
Electric Motor Drives for Gyratory Crushers by C. S. Lincoln....D38 28
Electrical Energy on Wheels by W. E. Schwartzburg....1Q47 4
Electrical Industry Looks Ahead! by C. W. Johnson....2Q48 4
Electricity for the Northwest by D. F. Misz.... S40 32

	Issue	Page
Electro-Magnetic Vibrating Screens by C. S. Lincoln	M38	28
Electronics — From Curiosity to World Power by William Guyton	S44	20
Engineer Looks at World War II, An, by C. Sturtzen	M40	5
Excitron, The, by S. R. Durand	J40	9

F

Finding Hidden Kilowatts by Fraser Jeffrey—		
Part I	J43	24
Part II	S43	29
First Line of Defense by L. C. Aicher	D40	9
Five Stages to Stability by T. B. Montgomery and H. D. Timm	3Q51	8
Five-Winding Transformer Equivalent Circuit by L. C. Aicher	D43	9
Fly-Ash Cleans Turbine Blading Faster by G. V. Williamson	1Q48	25
Flywheels for Synchronous Motors by F. K. Brainard	J38	5
Forgings for Steam Turbine Rotors by H. Dahlstrand and H. J. Stein	D39	20
Frills Jump the Cost of Autotransformers by L. W. Schoenig	3Q48	13
From Candle Power to KW by R. Loewe and R. Robinson	1Q51	18
From Cathode to Anode in a Mercury Arc Power Rectifier	S38	28
From Hemp Hawsers to Protective Paper by E. G. Ham	J42	29
Fundamental Problems of A-C Circuit Interruption by Dr. Erwin Salzer	D44	24
Fundamentals of A-C Circuit Interruption by Dr. E. Salzer —		
Part I	2Q48	20
Part II	3Q48	20
Part III	4Q48	18
Part IV	1Q49	28
Part V	2Q49	24
Part VI	3Q49	26
Fundamentals of Audio Noise Measurements as Applied to Transformers by L. H. Hill	J39	13
Fundamentals of Automatic Controls by W. Richter —		
Part I	1Q47	26
Part II	2Q47	26
Fused Starters Protect High Voltage Equipment by W. J. Herziger	2-3Q46	35

G

Gas Turbine, The, by J. T. Rettaliata —		
Part I	S41	20
Part II	D41	27
Part III	M42	26
Gas Turbine — Ready for Rails! by J. T. Rettaliata —		
Part I	D44	11
Part II	M45	20
Get The Most From Veteran Transformers This Easy Way by W. C. Sealey	M44	20
"Give 'Em Air!" by G. E. Jansson and H. W. Martin	M42	9
Graphical Differential Without Calculus by J. M. Ramrath	3Q51	28
Grouting by L. A. Watts —		
Part I	3Q47	21
Part II	4Q47	15
Part III	1Q48	20
Part IV	2Q48	30
Part V	4Q48	15

H

Hermetically Sealed Transformers Are Here to Stay by W. M. Terry, Jr.	1Q50	4
High Lines in Rough Terrain by F. D. Troxel	2Q52	4
High-Speed Reclosing Through the Years by H. B. Ashenden	3Q49	4
Hot Spot Temperature of Transformers	M42	16
How Andrew Hallidie Flattened San Francisco's Hills by A. R. Tofte	D41	10
How Current Transformer Application Affects Design by R. W. Beard	D39	16
How Much Can a Breaker Take? by P. L. Taylor	1Q52	4
How To Calculate Losses In Wound Rotor Motors by R. C. Moore	2-3Q46	15
How to Design Basic Controls for Automatic Hydro Stations by J. Baude	4Q49	24
How to Increase Capacity of Old and New Transformers by W. C. Sealey	D42	10
How to Parallel Regulators to Increase Feeder Capacity by W. L. Peterson and R. P. Marohn	M43	20
How to Prepare Better Slides by R. Campana	2Q51	4
How to Select Storage Batteries for Switchgear by Robert Loewe	D44	15
How to Tell If An Enclosed Motor Will Pay for Itself by G. Byberg	J44	28
Hydrogen Cooling—1951 by A. Lehrkind	4Q51	12
Hydrogen Cooling Simplified by A. Lehrkind and W. F. King	3Q47	6
Hydrogen Keeps 'Em Cool by V. J. Egan	S45	32
Hydro-Generators—Rugged Individualists by H. H. Roth	4Q51	22
Hydraulically Stored Energy—New Era in Circuit Breaker Actuation by E. R. Perry and N. W. Morelli	4Q52	4

I

Impulse Testing Without Delay by L. C. Aicher and J. H. Moran	4Q50	10
Induced Heat Rolls Up Its Sleeves by R. M. Serota	D45	10
Induction Heat Works Metal Magic by S. H. Mortensen	M45	4
Installing a Unit Substation by J. McGuire and W. E. Schwartzburg	2Q47	24
Interlocks for Switchgear, Rx, by A. Ewy	4Q48	12
Interphase Transformers for Mercury Arc Rectifiers by I. K. Dortort	M39	9
Interpretation of Time-Temperature Curves of Rotating Machines by F. Jeffrey and R. M. Osborn	J41	20
Inventions for Sale by H. S. Silver	M38	21
Inventions Need Birth Certificates by G. M. Albrecht	4Q47	18
Inventions "On Sale" by D. Journeaux	M42	20
Is It Sound, Or Noise? by L. C. Aicher —		
Part I	4Q46	9
Part II	1Q47	10
Is It Weight, Or Mass? by W. Richter	2Q48	31

	Issue	Page
Is More Inertia the Answer? by G. Byberg and V. J. Egan	1Q50	22
Is Your Bearing Trouble a Puzzler? by C. D. Lawton	4Q51	28
It's a Dark Secret by A. R. Tofte	J42	13
It's Simple to Overload Transformers — If You Know How by Harding B. Hansen	M44	24

J-K-L

Joint Inventorship by L. Teplow	J39	25
Know Your Patents by W. Zierold	M39	27
Landmarks in Oil Circuit Breaker Development by K. B. Seely	M43	11
Liquid Rheostat Returns, The, by A. Halster	1Q47	14
Loading of a Bank of Dissimilar Transformers by F. C. DeWeese	M38	30
Loading Evaluation of Transformers by L. S. Woodruff	2Q50	27
Low Initial Current Starters for Synchronous and Induction Motors, T. B. Montgomery	S38	9
Low Voltage Release, Low Voltage Protection by H. A. Wright	J40	16

M

Major Installation of Regulating Transformers, A, by H. R. Kurth	D38	5
Make and Break by F. A. Olmsted and R. J. Neagle	J41	5
Make Your Mark! by D. Journeaux	S42	31
Making Home Sweet Home by O. L. Parsons	D40	20
Making Ships Go by Henry Oman and Wm. H. Treptow	D43	30
Mastering The Short Circuit by Karl Lerstrup	J45	20
Mathematical Production Tools by W. C. Sealey	S41	14
Mercury Arc Static Inverter, A, by S. R. Durand	J39	25
Metal-Clad Switchgear for Power Plant Auxiliaries by H. H. Ackmann	4Q51	34
Models Build Better Power Plants by F. L. Dornbrook	2-3Q46	22
Methods of Closing and Tripping Circuit Breakers by R. Steiner and R. Loewe	4Q46	24
Modern Hydraulic Turbine Governor Design by A. Pfau	M39	5
Modern Lightning Diversion by L. C. Aicher	2Q51	10
Modernize Your Breakers? by F. T. Gifford and S. R. Stubbs	J45	10
Motion Study Can "Up" Office Efficiency 70 Percent by Harold W. Martin	M44	13
Motor Drives for Jaw Crushers by J. Furlong	J38	28
Motors for the Bridge of Ships by E. G. Menard	D41	5
Moving Freight Where It's Needed—Fast! by Ervin Manske	D42	20

N

New Blood for Old Switchgear by C. J. Teasley	1Q50	28
New Design of Roller Gate for the Regulation of Flood Water Levels, A, by C. R. Martin	J39	5
A New Principle of Arc Interruption by A. E. Herman	2Q50	22
New Trends in Turbo-Generators by L. T. Rosenberg	4Q50	4
New View of Conversion Factors, A by W. C. Sealey	J44	26
Nineteen Basic U. S. Inventions by Miles Henninger—		
Part I	J43	20
Part II	S43	20
Part III	D43	13
Part IV	M44	30
Nomographs By-Pass Test Costs by John Baude	2Q52	18
Notes on High Voltage Design by G. E. Jansson	J39	27
Now Instrument Transformer Standards Make Sense by F. E. Davis	J44	5

O

Obtaining and Measuring the Vacuum in a Mercury Arc Rectifier	M39	17
Oil Circuit Breakers, A Half-Century of, by K. B. Seely	4Q49	4
Oil for the Lamps of America by C. E. Trautman	M42	5
One Machine—Two Functions . . . New Reversible Pump-Turbine by Frank E. Jaski	4Q52	8
Operation of a 25 Cycle Transformer at 60 Cycles by W. C. Sealey	S40	30
Operation of Step Type Feeder Regulators by J. I. Onarheim	M38	5
Operation and Maintenance of Mercury Arc Rectifiers by R. O. Nixon	J38	8
Order Out of Chaos by H. A. Wallace	S41	9
Overload Protection for A-C Motors by H. A. Wright	D40	16

P

Packaged Bus Protects Electrical Conductors by J. S. Timmerman	1Q51	13
Panels, Sound Absorption of, by B. D. Nawn and D. F. Thompson	3Q50	24
Parallel Operation of Mercury Arc Rectifiers and Rotating Machinery by F. A. Lauper	S38	14
Paralleling Load Ratio Control Transformers by W. C. Sealey	3Q52	30
Paralleling Synchronous Frequency Changers by H. H. Roth	2Q52	24
Patents and Rights to Inventions by H. S. Silver and W. C. Sealey	D45	27
Patent Interference by L. Teplow	D38	31
Patents Make Sense, IF— by J. S. Lieb	4Q50	20
Performance Requirements of Hydro-Electric Units by A. Pfau	M38	14
Per Unit System, The, by C. F. Dalziel	J39	20
Phasing Out Switchgear Connections by R. E. Burlingame	1Q50	18
Pick The Right Rod — It's Easy! by E. P. Gorman	D45	5
Pioneering in Electronic Engineering by O. K. Marti	S42	5
Portable Sets Aid Balancing by E. W. Mills and W. F. King	1Q48	11
Potheads Are Important, Too! by H. H. Ackmann	4Q48	24
Power Developments on the Chippewa by C. R. Martin	S39	13
Power for a Modern Blooming, Bar and Billet Mill by C. H. Legler, J. Baude, W. E. Gutzwiller, and R. M. Peeples	1Q51	4
Power for Modern Chemical Plants by H. C. Bauman	3Q48	13
Power for Portland Cement by J. M. Wolfe—		
Part I	J42	5
Part II	S42	25

	Issue	Page
Power System Planning—Chicago Style by T. G. LeClair	S40	5
Predetermine Regulator Accuracy by W. F. Eagan	3Q52	15
Predetermining Voltage Distribution in Transformers by L. C. Aicher	3Q50	9
Preferred Numbers, Please! by R. O. Tjensvold	1Q46	16
Present-Day Line and Station Insulation by J. T. Lusignan, Jr.	S38	20
"Prinz" At The Crossroads, The, by H. Oman	1Q46	23
Problems in the Design and Operation of a Large Metropolitan Electric System by W. F. Sims	J38	20
Protect Motors from Surges by B. M. Kleinman	4Q52	12
Protect Your Motors From Invasion by G. Byberg and C. D. Lawton—		
Part I	S44	5
Part II	M45	30
Part III	1Q47	30
Part IV	3Q47	25
Part V	4Q47	25
Protect Your Trademark by E. Koppel	3Q51	30
PT's Are Getting Smaller by D. R. Laib	1Q52	20
Public Use in Private, or Vice Versa by D. Journeaux	J41	12
Pull-Out Reserve—Controlled and Indicated by T. B. Montgomery and D. V. Hotson	1Q52	11
Push-Button Testing of Power Transformers by S. L. Foster and W. C. Sealey	1Q50	10
Putting the Conductor Where the Current Is by D. K. Steidinger	S43	9

Q-R

Quick Conversion Plan Makes System Change Click by B. H. McCoin	M45	27
Reactance Affects Transformer Design by L. W. Schoenig	2Q49	9
Reactive Power Problem — Job for Regulator by W. L. Peterson	D44	20
Recent Trends in the Design of Power Transformers by L. H. Hill	D38	21
Rectifiers in Reverse by D. Journeaux	S39	20
Regulex — Instability In Harness by T. B. Montgomery	2-3Q46	5
Reheat — Past, Present and Future by C. A. Robertson	1Q49	9
Reheating Comes Back by C. W. Bloedorn	2Q48	6
Repainting Transformers in the Field by J. R. Mann and O. V. Stewart	4Q50	26
Reversing Motors for High Speed Planer Drives by G. E. Reiff	M38	24
Rotating Jitterbugs by W. F. King	M41	27
Rotating Regulators Control Systems Reactive Current by T. B. Montgomery and H. D. Timm	4Q51	4
Rural Line Transformer Protection by J. B. Hodtum	M39	31
Rx — Interlocks for Switchgear by A. Ewy	4Q48	12

S

Safeguarding Large AC Motors by E. N. Gigot and F. C. Osterland	1Q52	24
Sand in the Defense Machinery by J. P. Barton	M41	5
Scale Models Introduce Visual Planning of Unit Substations by John McGuire	J44	12
Selecting Shipboard Auxiliaries by A. D. Robertson and Frank Tatum	D42	27
Selecting a Low Voltage Breaker? by B. Holman	2Q47	12
Selecting Control for Heavy Machinery by W. R. Patterson and R. A. Gerg	4Q52	26
Selection of Electric Drives for Pumps Used in Small Waterworks by H. A. Bartling	M38	9
Shell's New Superimposed Power Plant by P. L. Andry, Jr.	2Q47	4
Short Time Heating of Transformers by W. C. Sealey	M41	24
Should Distribution Transformer Ratings Be Revised? by J. B. Hodtum	3Q47	22
Short Circuit Calculations for Circuit Breakers by R. E. Burlingame	3Q48	27
Showers and Cooler by C. W. Franklin	D41	20
Single Circuit Sub by W. E. Schwartzburg	4Q47	10
Sinusoidal D-C Positioner, The, by C. R. Mikolic	1Q46	20
Sixty Seconds' Worth by W. M. Pickslay	M40	27
Slow Speed Revolution by J. F. Sellers	J40	20
"Slugged Arc" by H. A. Wallace	J42	20
Solving the Shock Problem by Chas. Rockwood	1Q46	4
Something New Every Day by J. G. Linn	2Q47	18
Sound Absorption of Panels by B. D. Nawn and D. F. Thompson	3Q50	24
Spectrography Speeds Scrap Salvage by L. E. Royt	J41	9
Standardized for Saving by R. W. Beard	S42	14
Standardization Speed-Up Simplifies Substation Engineering by J. N. Banky	D45	20
Standards — Help or Hindrance by H. V. Nye	4Q49	11
Starting Synchronous Motors	M38	20
Static Capacitors Boost Systems Pay Load by H. E. Stites and R. Loewe	D45	31
Stem Voltage Floods on Circuit Breakers by P. L. Taylor	S45	20
Step by Step by F. W. Bush	D41	12
Streamlining Patent Prosecution by D. Journeaux	J40	25
Substation—In One Piece by R. C. Odell	S43	5
Supercharged Cooling of Generators by S. Beckwith	3Q51	4
Survey of Modern Motor Starters, A, by J. Baude	1Q47	20
Switchgear Control for Synchronous Motors by W. E. Schwartzburg and C. Straub	3Q51	20
Switchgear Drawings Clarified by Ray Stowe	3Q52	20
Symmetrical Components Aid in Determining Voltage Conditions for Small Motors by R. C. Moore	J42	27
Symmetrical Components Simplified by W. C. Sealey—		
Part I	D36	32
Part II	J38	31
System Trouble! Where? by R. P. Holland and W. E. Schwartzburg—		
Part I	3Q49	22
Part II	4Q49	20

T

"Take 'er Down" Is the Big Test for a Sub's Machinery by Ensign John A. Logan	S44	30
Taking Stock of Stored Energy in Magnetic Circuits by Walther Richter	J44	15
Take the Switchyard Along by F. J. Arnaud and R. Loewe	3Q50	4

	Issue	Page
Telephone Interference and Alternator Wave Shape by L. T. Rosenberg	J43	5
Testing of Power Transformers, Push-Button, by S. L. Foster and W. C. Sealey	1Q50	10
Testing Transformer Oils by W. C. Sealey	1Q49	24
Testing Your Motors "By Proxy" by H. T. Murdock	J45	4
Thermal Effects on Short Circuit Currents by G. E. Jansson	S38	29
Thinking of a Patent? by W. S. Gates	4Q46	18
Thirty Years of Automatic Reclosing by C. L. Headley	2Q49	16
Time Saver for Distribution Engineers by J. B. Hodtum	2Q51	15
Tin Cans and American Beauties by T. B. Montgomery	M40	20
To Beat the Band by W. F. King	M40	8
Today's Power Plant Motors by C. D. Lawton	3Q52	4
Transformers Are Winning Fight To Lick Lightning by L. C. Aicher	S45	24
Transformer Teamwork by W. C. Sealey	J40	28
Transformers for Ships by R. W. Beard and E. M. Leonard	D43	5
Transformers That Only Whisper by L. C. Aicher	J43	12
Trends in Power Transformer Application by L. W. Schoenig	3Q50	20
Trends in Turbo-Generators, New, by L. T. Rosenberg	4Q50	4
Typical European, High-Speed, Air Blast Circuit Breaker, A, by W. S. Edsall	D39	5

U-V

V-Belt Drive Fundamentals for Engineers by F. H. Rumble	2Q51	30
Variable Frequency Dynamometer by E. H. Fredrick and M. F. Gay	4Q52	20
Variations in the Dielectric Strength of Air by L. C. Aicher	3Q49	12
Views on Patent System Changes, I. M. Jones	S38	33
Visualizing Transformer Impedances by W. C. Sealey	2Q52	13
Voltor Diagram, The, by E. S. Warner	2Q49	4

W-Z

Water Cure, The, by F. J. Arnaud	M41	20
Water, Water Everywhere by S. E. Tray	M40	13
What A Power System Needs To Be "Effectively Grounded" by V. J. Cissna and W. C. Sealey	J45	28
What Every Engineer Should Read	D40	30
What Flux Does in a Machine by V. B. Honsinger	S43	15
What Goes on in the Mercury Arc Rectifier by D. Journeaux	D38	9
What Is a "Bigger" Transformer? by W. C. Sealey	4Q46	21
What Is Exciter Response? by H. H. Roth	3Q51	17
What Would Compulsory Patent Licensing Mean to You? by H. V. Nye and H. S. Silver	S40	27
"When" and "Why" Tips on Bushing Current Transformers by H. B. Ashenden	S44	24
When Bombs Burst by H. W. Martin	D42	5
Where Does Transformer Noise Come From? by T. F. Madden	4Q51	16
With or Without by F. C. DeWeese	M41	10
With the Greatest of Ease by H. N. Hayward	M41	29
Who Invented It by L. Teplow	J38	15
Zero Sequence Impedance by W. C. Sealey	J41	31
0.010—32 Gauge by D. B. Scott	S40	20
0.000 000 000 000 000 000 000 000 0009 Grams by O. Keller	M41	33

SUBJECT INDEX

Balancing

Rotating Jitterbugs by W. F. King	M41	27
Balancing Is Easy, If You Know How by W. F. King	2-3Q46	25
Thermal Balancing of Large Rotors by W. F. King	2Q47	8
Portable Sets Aid Balancing by E. W. Mills and W. F. King	1Q48	11

Betatron

Betatron — Industry's New Seeing Eye by J. P. Girard	2-3Q46	10
Building the 300,000,000-Volt Betatron by J. W. Becker and B. F. Ureda	2Q50	4
The Betatron Today by R. C. Odell —		
Part I	3Q50	13
Part II	4Q50	29

Central Station Problems

Present Day Line and Station Insulation by J. T. Lusignan, Jr.	S38	20
Water, Water Everywhere by S. E. Tray	M40	13
Sixty Seconds' Worth by W. M. Pickslay	M40	27
Models Build Better Power Plants by F. L. Dornbrook	2-3Q46	22

Circuit Breakers

Circuit Breaker Ratings	J38	17
Air Blast Circuit Breakers by W. S. Edsall	M39	23
Notes on High Voltage Bushing Design by G. E. Jansson	J39	27
A Typical European High-Speed Air Blast Breaker by W. S. Edsall	D39	5
Make and Break by F. A. Olmsted and R. J. Neagle	J41	5
"Breaker Operation, Please" by P. L. Taylor	S41	28
"Give 'Em Air!" by G. E. Jansson and H. W. Martin	M42	9
Birth of the Oil Circuit Breaker by Leonard L. Elden	M43	5
Landmarks in Oil Circuit Breaker Development by K. B. Seely	M43	11
Compact Breaker with Big Capacity by P. L. Taylor and A. C. Kelle	D43	24
"When" and "Why" Tips on Bushing Current Transformers by H. B. Ashenden	S44	24
Fundamental Problems of A-C Circuit Interruption by Dr. Erwin Salzer	D44	24

	Issue	Page
Fundamentals of AC Circuit Interruption by Dr. E. Salzer —		
Part I	2Q48	20
Part II	3Q48	20
Part III	4Q48	18
Part IV	1Q49	28
Part V	2Q49	24
Part VI	3Q49	26
Modernize Your Breakers? by F. T. Gifford and S. R. Stubbs	J45	10
Stem Voltage Floods on Circuit Breakers by P. L. Taylor	S45	20
Methods of Closing and Tripping Circuit Breakers by R. Steiner and R. Loewe	4Q46	24
Selecting a Low Voltage Breaker? by B. Holman	2Q47	12
Short Circuit Calculations for Circuit Breakers by R. E. Burlingame	3Q48	27
Thirty Years of Automatic Reclosing by C. L. Headley	2Q49	16
High-Speed Reclosing Through the Years by H. B. Ashenden	3Q49	4
System Trouble! Where? by R. P. Holland and W. E. Schwartzburg —		
Part I	3Q49	22
Part II	4Q49	20
A Half-Century of Oil Circuit Breakers by K. B. Seely	4Q49	4
New Blood for Old Switchgear by C. J. Teasley	1Q50	28
Coordinating Controller and Breaker Ratings by T. H. Bloodworth and T. B. Montgomery	2Q50	18
How Much Can a Breaker Take? by P. L. Taylor	1Q52	4
Hydraulically Stored Energy—New Era in Circuit Breaker Actuation by E. R. Perry and N. W. Morelli	4Q52	4

Control

Tin Cans and American Beauties by T. B. Montgomery	M40	20
Low Voltage Release, Low Voltage Protection by H. A. Wright	J40	16
Control Your Temper by T. B. Montgomery	S40	13
Overload Protection for A-C Motors by H. A. Wright	D40	16
Controlled Speed with A-C Motors by E. H. Fredrick and H. A. Petersen	J43	29
Making Ships Go by Henry Oman and Wm. H. Treptow	D43	30
"Big Inch" Oil — Under Control by A. S. Munneke and Jack I. Gates	M44	5
Control That Speed! by E. H. Fredrick and G. Byberg —		
Part I	D44	5
Part II	J45	23
Part III	S45	13
Part IV	1Q46	10
Part V	4Q46	5
Sinusoidal D-C Positioner, The, by C. R. Mikolic	1Q46	20
Regulex — Instability In Harness by T. B. Montgomery	2-3Q46	5
Fused Starters Protect High Voltage Equipment by W. J. Herziger	2-3Q46	35
Liquid Rheostat Returns, The, by A. Halter	1Q47	14
A Survey of Modern Motor Starters by J. Baude	1Q47	20
Fundamentals of Automatic Controls by W. Richter —		
Part I	1Q47	26
Part II	2Q47	26
The D-C Rotary Drilling Rig by E. F. Boening and M. Gay	4Q47	4
Choose Your Control Power Source by D. Dalasta	3Q48	9
How to Design Basic Control Schemes for Automatic Hydro Stations by J. Baude	4Q49	24
Driving the World's Largest Water Tunnel by E. F. Boening and F. M. Scott	2Q50	10
Coordinating Controller and Breaker Ratings by T. H. Bloodworth and T. B. Montgomery	2Q50	18
A New Principle in Arc Interruption by A. E. Herman	2Q50	22
Power for a Modern Blooming, Bar and Billet Mill by C. H. Legler, J. Baude, W. E. Gutzwiller, and R. M. Peeples	1Q51	4
Selecting Control for Heavy Machinery by W. R. Patterson and R. A. Gerg	4Q52	26

Dynamometers

Dynamometer Tests Jet Engines (24,000-hp) by M. Gay, W. F. King and D. Dalasta	1Q51	23
Variable Frequency Dynamometer by E. H. Fredrick and M. F. Gay	4Q52	20

Electronics

Electronics — From Curiosity to World Power by William Guyton	S44	20
Mercury Arc Converter Masters Metals in Deep Heating by H. F. Storm	M45	7
Induction Heat Works Metal Magic by S. H. Mortensen	M45	4
Vacuum Tube Converter — Key to Radio-Frequency Heating by J. M. Cage	M45	14
Induced Heat Rolls Up Its Sleeves by R. M. Serota	D45	10
Design of Work Coils by B. E. Griffith, Jr. and R. Skiba —		
Part I	4Q47	21
Part II	2Q48	11
Electronics in the Foundry? by B. E. Griffith, Jr.	4Q49	13

General

An Engineer Looks at World War II by C. Sturtzen	M40	5
Making Home Sweet Home by O. L. Parsons	D40	20
What Every Engineer Should Read	D40	30
How Andrew Hallidie Flattened San Francisco's Hills by A. R. Tofte	D41	10
When Bombs Burst by H. W. Martin	D42	5
Moving Freight Where It's Needed—Fast! by Ervin Manske	D42	20
Economics of Electric Power Pumping by C. A. Richardson	J44	20
Motion Study Can "Up" Office Efficiency 70 Percent by Harold W. Martin	M44	13
"Big Inch" Oil — Under Control by A. S. Munneke and Jack I. Gates	M44	5
Something New Every Day by J. G. Linn	2Q47	18
100 Years — 1847-1947	3Q47	4
Grouting by L. A. Watts —		
Part I	3Q47	21
Part II	4Q47	15
Part III	1Q48	20
Part IV	2Q48	30
Part V	4Q48	15

	Issue	Page
The Electrical Industry Looks Ahead by C. W. Johnson	2Q48	4
After Graduation, Opportunity by F. Jeffrey	4Q48	4
Potheads Are Important, Too! by H. H. Ackmann	4Q48	24
A Half-Century of Oil Circuit Breakers by K. B. Seely	4Q49	4
Standards — Help or Hindrance by H. V. Nye	4Q49	11
Sound Absorption of Panels by B. D. Nawn and D. F. Thompson	3Q50	24
Power for a Modern Blooming, Bar and Billet Mill by C. H. Legler, J. Baude, W. E. Gutzwiller, and R. M. Peeples	1Q51	4
How to Prepare Better Slides by R. Campana	2Q51	4
Modern Lightning Diversion by L. C. Aicher	2Q51	10
V-Belt Drive Fundamentals for Engineers by F. H. Rumble	2Q51	30
What Is Exciter Response? by H. H. Roth	3Q51	17
Analogies and Energies by D. Journeaux	1Q52	30
Analogies in AC Circuit Interruption by Dr. Erwin Salzer	2Q52	26
Protect Motors From Surges by B. M. Kleinman	4Q52	12

Generators

Bigger and Better by S. H. Mortensen	S41	4
Order Out of Chaos by H. A. Wallace	S41	9
"Slugged Arc" by H. A. Wallace	J42	20
What Flux Does in a Machine by V. B. Honsinger	S43	15
Finding Hidden Kilowatts by Fraser Jeffrey—		
Part I	J43	24
Part II	S43	29
Telephone Interference and Alternator Wave Shape by L. T. Rosenberg	J43	5
100 Years — 1847-1947	3Q47	4
Hydrogen Cooling Simplified by A. Lehrkind and W. F. King	3Q47	6
Transient Operation of DC Generators by D. Journeaux	3Q50	27
Supercharged Cooling of Generators by S. Beckwith	3Q51	4
What Is Exciter Response? by H. H. Roth	3Q51	17
Hydrogen Cooling—1951 by A. Lehrkind	4Q51	12
Pull-Out Reserve—Controlled and Indicated by T. B. Montgomery and D. V. Hotson	1Q52	11
Paralleling Synchronous Frequency Changers by H. H. Roth	2Q52	24

Hydro-Electric Machinery

Performance Requirements of Hydro-Electric Units by A. Pfau	M38	14
Modern Hydraulic Turbine Governor Design by A. Pfau	M39	5
A New Design of Roller Gate for the Regulation of Flood Water Levels by C. R. Martin	J39	5
Power Developments on the Chippewa by C. R. Martin	S39	13
Bigger and Better by S. H. Mortensen	S41	4
Order Out of Chaos by H. A. Wallace	S41	9
100 Years — 1847-1947	3Q47	4
Is More Inertia the Answer? by G. Byberg and V. J. Egan	1Q50	22
From Candle Power to KW by R. Loewe and R. Robinson	1Q51	18
Adjusting Vertical Thrust Bearings by J. E. Petermann	4Q51	30
Hydro-Generators—Rugged Individualists by H. H. Roth	4Q51	22
One Machine—Two Functions . . . New Reversible Pump-Turbine by Frank E. Jaski	4Q52	8

Marine

Motors for the Bridge of Ships by E. G. Menard	D41	5
Selecting Shipboard Auxiliaries by A. D. Robertson and Frank Tatum	D42	27
Transformers for Ships by R. W. Beard and E. M. Leonard	D43	5
Making Ships Go by Henry Oman and Wm. Treptow	D43	30
"Take 'er Down" Is the Big Test for a Sub's Machinery by Ensign John A. Logan	S44	30
"Prinz" At The Crossroads, The, by H. Oman	1Q46	23
Building Blocks of Marine Power by H. Oman	2-3Q46	29

Materials

Present-Day Line and Station Insulation by J. T. Lusignan, Jr.	S38	20
Forgings for Steam Turbine Rotors by H. Dahlstrand and H. J. Stein	D39	20
Check Your Oil, Sir? by J. I. Onarheim	M40	31
"Big Red" by W. B. Hibbard	D40	5
Sand in the Defense Machinery by J. P. Barton	M41	5
Spectrography Speed Scrap Salvage by L. E. Royt	J41	9
Oil for the Lamps of America by C. E. Trautman	M42	5
It's a Dark Secret by A. R. Tofte	J42	13
From Hemp Hawsers to Protective Paper by E. G. Ham	J42	29
Power for Portland Cement by J. M. Wolfe —		
Part I	J42	5
Part II	S42	25

Mathematics and Theory

Symmetrical Component Simplified by W. C. Sealey —		
Part I	D36	32
Part II	J38	31
The Per Unit System by C. F. Dalziel	J39	20
With the Greatest of Ease by H. N. Hayward	M41	29
Mathematical Production Tools by W. C. Sealey	S41	14
Designing Special Slide Rules by R. C. Odell	M43	31
Telephone Interference and Alternator Wave Shape by L. T. Rosenberg	J43	5
New View of Conversion Factors, A by W. C. Sealey	J44	26
Taking Stock of Stored Energy in Magnetic Circuits by Walther Richter	J44	15
Preferred Numbers, Please! by R. O. Tjensvold	1Q46	16
Design of Work Coils by B. E. Griffith, Jr. and R. Skiba —		
Part I	4Q47	21
Part II	2Q48	11

	Issue	Page
Calculating Transformer Rise for Various Loads by E. M. Leonard	1Q48	16
Is It Weight, Or Mass? by W. Richter	2Q48	31
Short Circuit Calculations for Circuit Breakers by R. E. Burlingame	3Q48	27
Fundamentals of A-C Circuit Interruption by Dr. E. Salzer —		
Part I	2Q48	20
Part II	3Q48	20
Part III	4Q48	18
Part IV	1Q49	28
Part V	2Q49	24
Part VI	3Q49	26
The Voltor Diagram by E. S. Warner	2Q49	4
Variations in the Dielectric Strength of Air by L. C. Aicher	3Q49	12
Predetermining Voltage Distribution in Transformers by L. C. Aicher	3Q50	9
Graphical Differential Without Calculus by J. M. Ramrath	3Q51	28
Nomographs By-Pass Test Costs by John Baude	2Q52	18

Motors (General)

To Beat the Band by W. F. King	M40	8
Overload Protection for A-C Motors by H. A. Wright	D40	16
Rotating Jitterbugs by W. F. King	M41	27
Interpretation of Time-Temperature Curves of Rotating Machines by F. Jeffrey and R. M. Osborn	J41	20
Motors for the Bridge of Ships by E. G. Menard	D41	5
What Flux Does in a Machine by V. B. Honsinger	S43	15
Finding Hidden Kilowatts by Frazer Jeffrey—		
Part I	J43	24
Part II	S43	29
How to Tell If An Enclosed Motor Will Pay for Itself by G. Byberg	J44	28
Protect Your Motors From Invasion by G. Byberg and C. D. Lawton —		
Part I	S44	5
Part II	M45	30
Part III	1Q47	30
Part IV	3Q47	25
Part V	4Q47	25
Control That Speed! by E. H. Fredrick and G. Byberg —		
Part I	D44	5
Part II	J45	23
Part III	S45	13
Part IV	1Q45	10
Part V	4Q46	5
Don't Lose Your Bearings! by G. L. Ringland	D44	30
Testing Your Motors "By Proxy" by H. T. Murdock	J45	4
Hydrogen Keeps 'Em Cool by V. J. Egan	S45	32
Balancing Is Easy If You Know How by W. F. King	2-3Q46	25
A Survey of Modern Motor Starters by J. Baude	1Q47	20
Thermal Balancing of Large Rotors by W. F. King	2Q47	8
100 Years — 1847-1947	3Q47	4
Hydrogen Cooling Simplified by A. Lehrkind and W. F. King	3Q47	6
Portable Sets Aid Balancing by E. W. Mills and W. F. King	1Q48	11
Don't Overlook Silicone Insulation by J. L. Kuehlthau	1Q48	22
Care of AC Rotating Equipment by F. Jeffrey —		
Part I	1Q49	13
Part II	2Q49	20
Part III	3Q49	18
Part IV	4Q49	30
Power for a Modern Blooming, Bar and Billet Mill by C. H. Legler, J. Baude, W. E. Gutzwiller, and R. M. Peeples	1Q51	4
Align Shafts, Not Couplings by W. F. King and J. E. Petermann	2Q51	26
Is Your Bearing Trouble a Puzzler? by C. D. Lawton	4Q51	28
Safeguarding Large AC Motors by E. N. Gigot and F. C. Osterland	1Q52	24
Today's Power Plant Motors by C. D. Lawton	3Q52	4

Motors, Direct Current

Reversing Motors for High Speed Planer Drives by G. E. Reiff	M38	24
Slow Speed Revolution by J. F. Sellers	J40	20
Making Ships Go by Henry Oman and Wm. H. Treptow	D43	30
The D-C Rotary Drilling Rig by E. F. Boening and M. Gay	4Q47	4

Motors, Applications of

Electro-Magnetic Vibrating Screens by C. S. Lincoln	M38	28
Selection of Electric Drives for Pumps Used in Small Waterworks by H. A. Bartling	M38	9
Motor Drives for Jaw Crushers, J. Furlong	J38	28
Electric Motor Drives for Gyratory Crushers by C. S. Lincoln	D38	28
Ball and Rod Mills and Their Motor Drives by E. F. Stemmler	M39	20
It's a Dark Secret by A. R. Tofte	J42	13
Power for Portland Cement by J. M. Wolfe—		
Part I	J42	5
Part II	S42	25
Selecting Shipboard Auxiliaries by A. D. Robertson and Frank Tatum	D42	27
How Varying Load Conditions Influence Motor Selection by F. K. Brainard and Fraser Jeffrey	4Q46	12
Emergency Sources Boost Power Supply by C. F. Dalziel	3Q48	4

Motors, Induction

Low Initial Current Starters for Synchronous and Induction Motors by T. B. Montgomery	S38	9
The Circle Diagram and the Induction Motor by F. Jeffrey —		
Part I	S39	5
Part II	D39	29
Symmetrical Components Aid in Determining Voltage Conditions for Small Motors by R. C. Moore	J42	27
Controlled Speed with A-C Motors by E. H. Fredrick and H. A. Petersen	J43	29
How To Calculate Losses In Wound Rotor Motors by R. C. Moore	2-3Q46	15
Emergency Sources Boost Power Supply by C. F. Dalziel	3Q48	4

	Issue	Page
Motors, Synchronous		
Starting Synchronous Motors	M38	20
Flywheels for Synchronous Motors by F. K. Brainard	J38	5
Low Initial Current Starters for Synchronous and Induction Motors by T. B. Montgomery	S38	9
The Application of Synchronous Motors to High Inertia Loads by F. K. Brainard	S39	31
How Andrew Hallidie Flattened San Francisco's Hills by A. R. Tofte	D41	10
Do It with Synchronous Motors by C. D. Lawton	D42	15
Patents		
Inventions for Sale by H. S. Silver	M38	21
Who Invented It by L. Teplow	J38	15
Views on Patent System Changes by I. M. Jones	S38	33
Patent Interference by L. Teplow	D38	31
Know Your Patents by W. Zierold	M39	27
Joint Inventorship by L. Teplow	J39	25
Streamlining Patent Prosecution by D. Journeaux	J40	25
What Would Compulsory Patent Licensing Mean to You? by H. S. Silver and H. V. Nye	S40	27
Can You Keep a Secret? by D. Journeaux	D40	25
Public Use in Private, or Vice Versa by D. Journeaux	J41	12
Inventions "On Sale" by D. Journeaux	M42	20
Make Your Mark! by D. Journeaux	S42	31
Are You Getting Full Patent Protection? by D. Journeaux	M43	26
Nineteen Basic U. S. Inventions by Miles Henninger—		
Part I	J43	20
Part II	S43	20
Part III	D43	13
Part IV	M44	30
"Dog Tags" for Industry's Product Army by D. Journeaux	S44	15
Patents and Rights to Inventions by H. S. Silver and W. C. Sealey	D45	27
Thinking of a Patent? by W. S. Gates	4Q46	18
Do You Know Your Own Invention? by D. Journeaux	3Q47	18
Inventions Need Birth Certificates! by G. M. Albrecht	4Q47	18
Patents Make Sense, IF, by J. S. Lieb	4Q50	20
Protect Your Trademark by E. Koppel	3Q51	30
Rectifiers, Mercury Arc		
Operation and Maintenance of Mercury Arc Rectifiers by R. O. Nixon	J38	8
Parallel Operation of Mercury Arc Rectifiers and Rotating Machinery by F. A. Lauper	S38	14
From Cathode to Anode in a Mercury Arc Power Rectifier	S38	28
What Goes on in the Mercury Arc Rectifier by D. Journeaux	D38	9
Interphase Transformers for Mercury Arc Rectifiers by I. K. Dortort	M39	9
Obtaining and Measuring the Vacuum in a Mercury Arc Rectifier	M39	17
Electric Means for Measuring Low Pressures in Mercury Arc Rectifiers	J39	11
Rectifiers in Reverse by D. Journeaux	S39	20
A Mercury Arc Static Inverter, S. R. Durand	S39	25
The Excitron by S. R. Durand	J40	9
0.000 000 000 000 000 000 000 000 0009 Grams by O. Keller	M41	33
Pioneering in Electronic Engineering by O. K. Marti	S42	5
Mercury Arc Converter Masters Metals in Deep Heating by H. F. Storm	M45	7
100 Years — 1847-1947	3Q47	4
Power for a Modern Blooming, Bar and Billet Mill by C. H. Legler, J. Baude, W. E. Gutzwiller, and R. M. Peeples	1Q51	4
Regulators, Feeder Voltage		
Operation of Step Type Feeder Regulators by J. I. Onarheim	M38	5
Step by Step by F. W. Bush	D41	12
How to Parallel Regulators to Increase Feeder Capacity by W. L. Peterson and R. P. Marohn	M43	20
Reactive Power Problem — Job for a Regulator by W. L. Peterson	D44	20
Closed Delta Operation of Single-Phase Step Type Regulators by C. W. Nielsen	3Q52	25
Regulators, Generator Voltage		
Sixty Seconds' Worth by W. M. Pickslay	M40	27
Five Stages to Stability by T. B. Montgomery and H. D. Timm	3Q51	8
Rotating Regulators Control Systems Reactive Current by T. B. Montgomery and H. D. Timm	4Q51	4
Pull-Out Reserve—Controlled and Indicated by T. B. Montgomery and D. V. Hotson	1Q52	11
Dynamic Performance of Synchronous Generator Voltage Regulators by H. W. Cory and W. F. Eagan	3Q52	10
Predetermine Regulator Accuracy by W. F. Eagan	3Q52	15
Switchgear		
Aerial Photography Trick Simplifies Switchgear Installation Engineering by T. G. A. Sillers	S44	11
How to Select Storage Batteries for Switchgear by Robert Loewe	D44	15
Mastering The Short Circuit by Karl Lerstrup	J45	20
Static Capacitors Boost Systems Pay Load by H. E. Stites and R. Loewe	D45	31
A Survey of Modern Motor Starters by J. Baude	1Q47	20
100 Years — 1847-1947	3Q47	4
Power for Modern Chemical Plants by H. C. Bauman	3Q48	13
Choose Your Control Power Source by D. Dalasta	3Q48	9
Rx — Interlocks for Switchgear by A. Ewy	4Q48	12
System Trouble! Where? by R. P. Holland and W. E. Schwartzburg —		
Part I	3Q49	22
Part II	4Q49	20
Phasing Out Switchgear Connections by R. E. Burlingame	1Q50	18
New Blood for Old Switchgear by C. J. Teasley	1Q50	28
Power for a Modern Blooming, Bar and Billet Mill by C. H. Legler, J. Baude, W. E. Gutzwiller, and R. M. Peeples	1Q51	4

	Issue	Page
Basic Rules for Protecting Relaying by H. V. Nye	2Q51	20
Switchgear Control for Synchronous Motors by W. E. Schwartzburg and C. Straub	3Q51	20
Metal-Clad Switchgear for Power Plant Auxiliaries by H. H. Ackmann	4Q51	34
Switchgear Drawings Clarified by Ray Stowe	3Q52	20
Air-Cooled Transformers Withstand Switchgear Impulse Tests by Albert Ewy	4Q52	31

Transformers, Distribution

Rural Line Transformer Protection by J. B. Hodtum	M39	31
Beating Black-Outs by W. G. Kelley	J40	5
Should Distribution Transformer Ratings Be Revised? by J. B. Hodtum	3Q47	22
100 Years — 1847-1947	3Q47	4
The Voltor Diagram by E. S. Warner	2Q49	4
Hermetically Sealed Transformers Are Here by W. M. Terry, Jr.	1Q50	4

Transformers, Instrument

How Current Transformer Application Affects Design by R. W. Beard	D39	16
Standardized for Savings by R. W. Beard	S42	14
Now Instrument Transformer Standards Make Sense by F. E. Davis	J44	5
"When" and "Why" Tips on Bushing Current Transformers by H. B. Ashenden	S44	24
Correcting Errors in 3-Phase Power Measurement by D. R. Laib	1Q49	20
PT's Are Getting Smaller by D. R. Laib	1Q52	20
Air-Cooled Transformers Withstand Switchgear Impulse Tests by Albert Ewy	4Q52	31

Transformers, Network

Showers and Cooler by C. W. Franklin	D41	20

Transformers, Power

Loading of a Bank of Dissimilar Transformers by F. C. DeWeese	M38	30
A Major Installation of Regulating Transformers by H. R. Kurth	D38	5
Changing Taps Under Load on Transformers	D38	17
Recent Trends in the Design of Power Transformers by L. H. Hill	D38	21
Fundamentals of Audio Noise Measurements as Applied to Transformers by L. H. Hill	J39	13
Angular Displacement in 3-Phase Transformer Banks by G. W. Clothier	J39	32
Simple Method of Calculating Transformer Temperature Rise with Variable Loads by W. C. Sealey	D39	11
Check Your Oil, Sir? by J. I. Onarheim	M40	31
Transformer Teamwork by W. C. Sealey	J40	28
Operation of a 25 Cycle Transformer at 60 Cycles by W. C. Sealey	S40	30
First Line of Defense by L. C. Aicher	D40	9
The Water Cure by F. J. Arnaud	M41	20
Short Time Heating of Transformers by W. C. Sealey	M41	24
Zero Sequence Impedance by W. C. Sealey	J41	31
Hot Spot Temperature of Transformers	M42	16
Blowing Transformer Ratings Upward by K. P. Wiederkehr	S42	20
How to Increase Capacity of Old and New Transformers by W. C. Sealey	D42	10
Cold Day—Overload Transformers? by W. C. Sealey	S43	26
Five-Winding Transformer Equivalent Circuit by L. C. Aicher	D43	9
Transformers That Only Whisper by L. C. Aicher	J43	12
Get the Most from Veteran Transformers This Easy Way by W. C. Sealey	M44	20
It's Simple to Overload Transformers — If You Know How by Harding B. Hansen	M44	24
What A Power System Needs To Be "Effectively Grounded" by V. J. Cissna and W. C. Sealey	J45	28
Transformers Are Winning Fight To Lick Lightning by L. C. Aicher	S45	24
100 Years — 1847-1947	3Q47	4
Calculating Transformer Rise for Various Loads by E. M. Leonard	1Q48	16
Frills Jump the Cost of Autotransformers by L. W. Schoenig	1Q48	4
Changing Taps Under Load by L. W. Schoenig	4Q48	8
"Coordinated Insulation" — New Transformer Milestone by S. L. Foster	1Q49	4
Testing Transformer Oils by W. C. Sealey	1Q49	24
Reactance Affects Transformer Design by L. W. Schoenig	2Q49	9
Push-Button Testing of Power Transformers by S. L. Foster and W. C. Sealey	1Q50	10
Loading Evaluation of Transformers by L. S. Woodruff	2Q50	27
Predetermining Voltage Distribution in Transformers by L. C. Aicher	3Q50	9
Trends in Power Transformer Application by L. W. Schoenig	3Q50	20
Impulse Testing Without Delay by L. C. Aicher and J. H. Moran	4Q50	10
Corona — Another Transformer "Has-Been" by L. C. Aicher	4Q50	13
Repainting Transformers in the Field by J. R. Mann and O. V. Stewart	4Q50	26
A Million Breaks by A. H. Baguhn and G. W. Lengnick	3Q51	14
Where Does Transformer Noise Come From? by T. F. Madden	4Q51	16
Visualizing Transformer Impedances by W. C. Sealey	2Q52	13
Paralleling Load Ratio Control Transformers by W. C. Sealey	3Q52	30

Transmission System

Problems in the Design and Operation of a Large Metropolitan Electric System by W. F. Sims	J38	20
Bucking the Storm by I. W. Collins	S38	5
Present-Day Line and Station Insulation by J. T. Lusignan, Jr.	S38	20
Thermal Effects on Short Circuit Currents by G. E. Jansson	S38	29
Power System Planning — Chicago Style by T. G. LeClair	S40	5
Electricity for the Northwest by D. F. Misz	S40	32
With or Without by F. C. DeWeese	M41	10

	Issue	Page
Substation—In One Piece by R. C. Odell	S43	5
Quick Conversion Plan Makes System Change Click by B. H. McCoin	M45	27
Electrical Energy on Wheels by W. E. Schwartzburg	1Q47	4
Installing a Unit Substation by J. McGuire and W. E. Schwartzburg	2Q47	24
110 Kv on Wheels by K. Wiederkehr and R. Loewe	3Q47	11
Single Circuit Sub by W. E. Schwartzburg	4Q47	10
Power for Modern Chemical Plants by H. C. Bauman	3Q48	13
Check That Ground by R. Loewe	2Q48	26
Hermetically Sealed Transformers Are Here to Stay by W. M. Terry, Jr.	1Q50	4
Driving the World's Largest Water Tunnel by E. F. Boening and F. M. Scott	2Q50	10
Take the Switchyard Along by F. J. Arnaud and R. Loewe	3Q50	4
High Lines in Rough Terrain by F. D. Troxel	2Q52	4

Turbines, Gas

The Gas Turbine by J. T. Rettaliata —		
Part I	S41	20
Part II	D41	27
Part III	M42	26
Gas Turbine — Ready for Rails! by J. T. Rettaliata —		
Part I	D44	11
Part II	M45	20

Turbines, Steam

Forgings for Steam Turbine Rotors by H. Dahlstrand and H. J. Stein	D39	20
Burbank's Sunshine Power Plant by J. H. McCambridge	D45	14
Shell's New Superimposed Power Plant by P. L. Andry, Jr.	2Q47	4
100 Years — 1847-1947	3Q47	4
Fly-Ash Cleans Turbine Blading Faster by G. V. Williamson	1Q48	25
Reheating Comes Back by C. W. Bloedorn	2Q48	6
Reheat — Past, Present and Future by C. A. Robertson	1Q49	9

Unit Substations

A Substation — In One Piece by R. C. Odell	S43	5
Scale Models Introduce Visual Planning of Unit Substations by John McGuire	J44	12
Standardization Speed-Up Simplifies Substation Engineering by J. N. Banky	D45	20
Electrical Energy on Wheels by W. E. Schwartzburg	1Q47	4
Installing a Unit Substation by J. McGuire and W. E. Schwartzburg	2Q47	24
110 Kv on Wheels by K. Wiederkehr and R. Loewe	3Q47	11
Single Circuit Sub by W. E. Schwartzburg	4Q47	10
Power for Modern Chemical Plants by H. C. Bauman	3Q48	13
Take the Switchyard Along by F. J. Arnaud and R. Loewe	3Q50	4
Double-Ended Substations . . . Economy or Luxury? by J. V. McGuire	2Q52	10
Protect Motors from Surges by B. M. Kleinman	4Q52	12

Welding

0.010 Inch—32 Gauge by D. B. Scott	S40	20
Brazing with Silver Alloys by J. E. Petermann and E. H. Fredrick	D43	20
Pick The Right Rod — It's Easy! by E. P. Gorman	D45	5

INDEX OF AUTHORS

Ackmann, H. H. — Potheads Are Important, Too!	4Q48	24
Metal-Clad Switchgear for Power Plant Auxiliaries	4Q51	34
Aicher, L. C.—First Line of Defense	D40	9
Transformers That Only Whisper	J43	12
Five-Winding Transformer Equivalent Circuit	D43	9
Transformers Are Winning Fight to Lick Lightning	S45	24
Is It Sound, Or Noise? —		
Part I	4Q46	9
Part II	1Q47	10
Variations in the Dielectric Strength of Air	3Q49	12
Predetermining Voltage Distribution in Transformers	3Q50	9
Impulse Testing Without Delay	4Q50	10
Corona — Another Transformer "Has-Been"	4Q50	13
Modern Lightning Diversion	2Q51	10
Albrecht, G. M. — Inventions Need Birth Certificates	4Q47	18
Andry, Jr., P. L. — Shell's New Superimposed Power Plant	2Q47	4
Anonymous — 100 Years, 1847-1947	3Q47	4
Arnaud, F. J.—The Water Cure	M41	20
Take the Switchyard Along	3Q50	4
Ashenden, H. B.—"When" and "Why" Tips on Bushing Current Transformers	S44	24
High-Speed Reclosing Through the Years	3Q49	4
Baguhn, A. H. — A Million Breaks	3Q51	14
Banky, J. N. — Standardization Speed-Up Simplifies Substation Engineering	D45	20
Bartling, H. A.—Selection of Electric Drives for Pumps Used in Small Waterworks	M38	9
Barton, J. P.—Sand in the Defense Machinery	M41	5
Baude, J. — A Survey of Modern Motor Starters	1Q47	20
How to Design Basic Controls for Automatic Hydro Stations	4Q49	24
Power for a Modern Blooming, Bar and Billet Mill	1Q51	4
Nomographs By-Pass Test Costs	2Q52	18
Bauman, H. C. — Power for Modern Chemical Plants	3Q48	13
Beard, R. W.—How Current Transformer Application Affects Design	D39	16

	Issue	Page
Standardized for Savings	S42	14
Transformers for Ships	D43	5
Becker, J. W. — Building the 300,000,000-Volt Betatron	2Q50	4
Beckwith, S. — Supercharged Cooling of Generators	3Q51	4
Bloedorn, C. W. — Reheating Comes Back	2Q48	6
Bloodworth, T. H. — Coordinating Controller and Breaker Ratings	2Q50	18
Boening, E. F. — The D-C Rotary Drilling Rig	4Q47	4
Driving the World's Largest Water Tunnel	2Q50	10
Brainard, F. K.—Flywheels for Synchronous Motors	J38	5
The Application of Synchronous Motors to High Inertia Loads	S39	31
How Varying Load Conditions Influence Motor Selection	4Q46	12
Burlingame, R. E. — Short Circuit Calculations for Circuit Breakers	3Q48	27
Phasing Out Switchgear Connections	1Q50	18
Bush, F. W.—Step by Step	D41	12
Byberg, G. — How to Tell If An Enclosed Motor Will Pay for Itself	J44	28
Protect Your Motors from Invasion —		
Part I	S44	5
Part II	M45	30
Part III	1Q47	30
Part IV	3Q47	25
Part V	4Q47	25
Control That Speed! —		
Part I	D44	5
Part II	J45	23
Part III	S45	13
Part IV	1Q46	10
Part V	4Q46	5
Is More Inertia the Answer?	1Q50	22
Cage, J. M. — Vacuum Tube Converter — Key to Radio-Frequency Heating	M45	14
Campana, R. — How to Prepare Better Slides	2Q51	4
Cissna, V. J. — What A Power System Needs to Be "Effectively Grounded"	J45	28
Clothier, G. W.—Angular Displacement in 3-Phase Transformer Banks	J39	32
Collins, I. W.—Bucking the Storm	S38	5
Cory, H. W. — Dynamic Performance of Synchronous Generator Voltage Regulators	3Q52	10
Dahlstrand, H.—Forgings for Steam Turbine Rotors	D39	20
Dalasta, D. — Choose Your Control Power Source	3Q48	9
Dynamometer Tests Jet Engines (24,000-hp)	1Q51	23
Dalziel, C. F.—The Per Unit System	J39	20
Emergency Sources Boost Power Supply	3Q48	4
Davis, F. E.—Now Instrument Transformer Standards Make Sense	J44	5
DeWeese, F. C.—Loading of a Bank of Dissimilar Transformers	M38	30
With or Without	M41	10
Dornbrook, F. L. — Models Build Better Power Plants	2-3Q46	22
Dortort, I. K.—Interphase Transformers for Mercury Arc Rectifiers	M39	9
Durand, S. R. — A Mercury Arc Static Inverter	S39	25
The Excitron	J40	9
Edsall, W. S.—Air Blast Circuit Breakers	M39	23
A Typical European, High-Speed, Air Blast Circuit Breaker	D39	5
Eagan, W. F. — Dynamic Performance of Synchronous Generator Voltage Regulators	3Q52	10
Predetermine Regulator Accuracy	3Q52	15
Egan, V. J. — Hydrogen Keeps 'Em Cool	S45	32
Is More Inertia the Answer?	1Q50	22
Elden, Leonard L.—Birth of the Oil Circuit Breaker	M43	5
Ewy, A. — Rx — Interlocks for Switchgear	4Q48	12
Air-Cooled Transformer Withstands Switchgear Impulse Tests	4Q52	31
Foster, S. L. — "Coordinated Insulation" — New Transformer Milestone	1Q49	4
Push-Button Testing of Power Transformers	1Q50	10
Franklin, C. W.—Showers and Cooler	D41	20
Fredrick, E. H.—Controlled Speed with A-C Motors	J43	29
Brazing with Silver Alloys	D43	20
Control That Speed! —		
Part I	D44	5
Part II	J45	23
Part III	S45	13
Part IV	1Q46	10
Part V	4Q46	5
Variable Frequency Dynamometer	4Q52	20
Furlong, J.—Motor Drives for Jaw Crushers	J38	28
Gates, Jack I.—"Big Inch" Oil—Under Control	M44	5
Gates, W. S. — Thinking of a Patent?	4Q46	18
Gay, M. — The D-C Rotary Drilling Rig	4Q47	4
Dynamometer Tests Jet Engines (24,000-hp)	1Q51	23
Variable Frequency Dynamometer	4Q52	20
Gerg, R. A. — Selecting Control for Heavy Machinery	4Q52	26
Gifford, F. T. — Modernize Your Breakers?	J45	10
Gigot, E. N. — Safeguarding Large AC Motors	1Q52	24
Girard, J. P. — Betatron — Industry's New Seeing Eye	2-3Q46	10
Gorman, E. P. — Pick the Right Rod — It's Easy	D45	5
Griffith, Jr., B. E. — Design of Work Coils —		
Part I	4Q47	21
Part II	2Q48	11
Electronics in the Foundry?	4Q49	13
Gutzwiller, W. E. — Power for a Modern Blooming, Bar and Billet Mill	1Q51	4
Guyton, Wm.—Electronics—From Curiosity to World Power	S44	20
Halter, A. — The Liquid Rheostat Returns	1Q47	14
Ham, E. G.—From Hemp Hawsers to Protective Paper	J42	29
Hansen, H. B.—It's Simple to Overload Transformers—If You Know How	M44	24
Hayward, H. N.—With the Greatest of Ease	M41	29
Headley, C. L. — Thirty Years of Automatic Reclosing	2Q49	16
Henninger, Miles—Nineteen Basic U. S. Inventions—		
Part I	J43	20
Part II	S43	20
Part III	D43	13
Part IV	M44	29
Herman, A. E. — A New Principle of Arc Interruption	2Q50	22
Herziger, W. J. — Fused Starters Protect High Voltage Equipment	2-3Q46	35
Hibbard, W. B.—"Big Red"	D40	5

	Issue	Page
Hill, L. H. — Recent Trends in the Design of Power Transformers	D38	21
Fundamentals of Audio Noise Measurements as Applied to Transformers	J39	13
Hodtum, J. B. — Rural Line Transformer Protection	M39	31
Should Distribution Transformer Ratings Be Revised?	3Q47	22
Time Saver for Distribution Engineers	2Q51	15
Holland, R. P. — System Trouble! Where? — Part I	3Q49	22
Part II	4Q49	20
Holman, B. — Selecting a Low Voltage Breaker?	2Q47	12
Honsinger, V. B.—What Flux Does in a Machine	S43	15
Hotson, D. V. — Pull-Out Reserve—Controlled and Indicated	1Q52	11
Jansson, G. E.—Thermal Effects on Short Circuit Currents	S38	29
Notes on High Voltage Bushing Design	J39	27
"Give 'Em Air!"	M42	9
Jaski, Frank E. — One Machine—Two Functions . . . New Reversible Pump-Turbine	4Q52	8
Jeffrey, F.—The Circle Diagram and the Induction Motor — Part I	S39	5
Part II	D39	29
Interpretation of Time-Temperature Curves of Rotating Machines	J41	20
Finding Hidden Kilowatts Part I	J43	24
Part II	S43	29
How Varying Load Conditions Influence Motor Selection	4Q46	12
After Graduation, Opportunity	4Q48	4
Care of AC Rotating Equipment — Part I	1Q49	13
Part II	2Q49	20
Part III	3Q49	18
Part IV	4Q49	30
Johnson, W. C.—The Electrical Industry Looks Ahead	2Q48	4
Jones, I. M.—Views on Patent System Changes.	S38	33
Journeaux, D.—What Goes on in the Mercury Arc Rectifier	D38	9
Rectifiers in Reverse	S39	20
Streamlining Patent Prosecution	J40	25
Can You Keep a Secret?	D40	25
Public Use in Private, or Vice Versa	J41	12
Inventions "On Sale"	M42	20
Make Your Mark!	S42	31
Are You Getting Full Patent Protection?	M43	26
"Dog Tags" for Industry's Product Army	S44	15
Do You Know Your Own Invention?	3Q47	18
Transient Operation of DC Generators	3Q50	27
Analogies and Energies	1Q52	30
Kelle, A. C.—Compact Breaker with Big Capacity	D43	24
Keller, O.— 0.000 000 000 000 000 000 000 000 0009 Grams	M41	33
Kelley, W. G.—Beating Black-Outs	J40	5
King, W. F.—To Beat the Band	M40	8
Rotating Jitterbugs	M41	27
Balancing Is Easy If You Know How	2-3Q46	25
Thermal Balancing of Large Rotors	2Q47	8
Hydrogen Cooling Simplified	3Q47	6
Portable Sets Aid Balancing	1Q48	11
Dynamometer Tests Jet Engines (24,000-hp)	1Q51	23
Align Shafts, Not Couplings	2Q51	26
Kleinman, B. M. — Protect Motors from Surges	4Q52	12
Koppel, E. — Protect Your Trademark	3Q51	30
Kuehlthau, J. L. — Don't Overlook Silicone Insulation	1Q48	22
Kurth, H. R.—A Major Installation of Regulating Transformers	D38	5
Laib, D. R. — Correcting Errors in 3-Phase Power Measurement	1Q49	20
PT's Are Getting Smaller	1Q52	20
Lauper, F. A.—Parallel Operation of Mercury Arc Rectifiers and Rotating Machinery	S38	14
Lawton, C. D.—Do It with Synchronous Motors.	D42	15
Protect Your Motors from Invasion — Part I	S44	5
Part II	M45	30
Part III	1Q47	30
Part IV	3Q47	25
Part V	4Q47	25
Is Your Bearing Trouble a Puzzler?	4Q51	28
Today's Power Plant Motors	3Q52	4
LeClair, T. G.—Power System Planning—Chicago Style	S40	5
Legler, C. H. — Power for a Modern Blooming, Bar and Billet Mill	1Q51	4
Lehrkind, A. — Hydrogen Cooling Simplified	3Q47	6
Hydrogen Cooling—1951	4Q51	12
Lengnick, G. W. — A Million Breaks	3Q51	14
Leonard, E. M.—Transformers for Ships	D43	5
Calculating Transformer Rise for Various Loads	1Q48	16
Lerstrup, Karl — Mastering the Short Circuit	J45	20
Lieb, J. S. — Patents Make Sense, IF	4Q50	20
Lincoln, C. S. — Electro-Magnetic Vibrating Screens	M38	28
Electric Motor Drives for Gyratory Crushers	D38	28
Linn, J. G. — Something New Every Day	2Q47	18
One for The Books	2Q47	21
Loewe, Robert—How to Select Storage Batteries for Switchgear	D44	15
Static Capacitors Boost Systems Pay Load	D45	31
Methods of Closing and Tripping Circuit Breakers	4Q46	24
110 Kv on Wheels	3Q47	11
Check That Ground	2Q48	26
Take the Switchyard Along	4Q50	4
From Candle Power to KW	1Q51	18
Logan, Ensign J. A.—"Take 'er Down" Is the Big Test for a Sub's Machinery	S44	30
Lusignan, J. T., Jr.—Present-Day Line and Station Insulation	S38	20
Madden, T. F. — Where Does Transformer Noise Come From?	4Q51	16
Mann, J. R. — Repainting Transformers in the Field	4Q50	26
Manske, Ervin — Moving Freight Where It's Needed—Fast	D42	20
Marohn, R. P.—How to Parallel Regulators to Increase Feeder Capacity	M43	20
Marti, O. K. — Pioneering in Electronic Engineering	S42	5
Martin, C. R.—A New Design of Roller Gate for the Regulation of Flood Water Levels.	J39	5
Power Developments on the Chippewa	S39	13

	Issue	Page
Martin, H. W.—"Give 'Em Air!"	M42	9
When Bombs Burst	D42	5
Motion Study Can "Up" Office Efficiency 70 Percent	M44	13
McCambridge, J. H. — Burbank's Sunshine Power Plant	D45	14
McCoin, B. H. — Quick Conversion Plan Makes System Change Click	M45	27
McGuire, John—Scale Models Introduce Visual Planning of Unit Substations	J44	12
Installing a Unit Substation	2Q47	24
Double-Ended Substation—Economy or Luxury?	2Q52	10
Menard, E. G.—Motors for the Bridge of Ships	D41	5
Mikolic, C. R. — The Sinusoidal D-C Positioner	1Q46	20
Mills, E. W. — Portable Sets Aid Balancing	1Q48	11
Misz, D. F.—Electricity for the Northwest	S40	32
Montgomery, T. B. — Low Initial Current Starters for Synchronous and Induction Motors	S38	9
Tin Cans and American Beauties	M40	20
Control Your Temper	S40	13
Regulex — Instability In Harness	2-3Q46	5
Coordinating Controller and Breaker Ratings	2Q50	18
Five Stages to Stability	3Q51	8
Rotating Regulators Control Systems Reactive Current	4Q51	4
Pull-Out Reserve—Controlled and Indicated	1Q52	11
Moore, R. C.—Symmetrical Components Aid in Determining Voltage Conditions for Small Motors	J42	27
How to Calculate Losses In Wound Rotor Motors	2-3Q46	15
Moran, J. H. — Impulse Testing Without Delay	4Q50	10
Morelli, N. W. — Hydraulically Stored Energy —New Era in Circuit Breaker Actuation	4Q52	4
Mortensen, S. H.—Bigger and Better	S41	4
Induction Heat Works Metal Magic	M45	4
Munneke, A. S.—"Big Inch" Oil—Under Control	M44	5
Murdock, H. T. — Testing Your Motors "By Proxy"	J45	4
Nawn, B. D. — Sound Absorption of Panels	3Q50	24
Neagle, R. J.—Make and Break	J41	5
Nielsen, C. W. — Closed Delta Operation of Single-Phase Step Type Regulators	3Q52	25
Nixon, R. O.—Operation and Maintenance of Mercury Arc Rectifiers	J38	8
Nye, H. V. — What Would Compulsory Patent Licensing Mean to You?	S40	27
Standards, Help or Hindrance	4Q49	11
Basic Rules for Protective Relaying	2Q51	20
Odell, R. C.—Designing Special Slide Rules	M43	31
Substation — In One Piece	S43	5
The Betatron Today — Part I	3Q50	13
Part II	4Q50	29
Olmsted, F. A.—Make and Break	J41	5
Oman, Henry—Making Ships Go	D43	30
The "Prinz" At the Crossroads	1Q46	23
Building Blocks of Marine Power	2-3Q46	29
Onarheim, J. I. — Operation of Step-Type Feeder Regulators	M38	5
Check Your Oil, Sir?	M40	31
Osborn, R. M.—Interpretation of Time-Temperature Curves of Rotating Machines	J41	20
Osterland, F. C. — Safeguarding Large AC Motors	1Q52	24
Parsons, O. L.—Making Home Sweet Home	D40	20
Patterson, W. R. — Selecting Control for Heavy Machinery	4Q52	26
Peeples, R. M. — Power for a Modern Blooming, Bar and Billet Mill	1Q51	4
Perry, E. R. — Hydraulically Stored Energy—New Era in Circuit Breaker Actuation	4Q52	4
Petermann, J. E.—Brazing with Silver Alloys	D43	20
Adjusting Vertical Thrust Bearings	4Q51	30
Align Shafts, Not Couplings	2Q51	25
Petersen, H. A.—Controlled Speed with A-C Motors	J43	29
Peterson, W. L.—How to Parallel Regulators to Increase Feeder Capacity	M43	20
Reactive Power Problem—Job for a Regulator	D44	20
Pfau, A. — Performance Requirements of Hydro-Electric Units	M38	14
Modern Hydraulic Turbine Governor Design	M39	5
Pickslay, W. M.—Sixty Seconds' Worth	M40	27
Ramrath, J. M. — Graphical Differential Without Calculus	3Q51	28
Reiff, G. E.—Reversing Motors for High Speed Planer Drives	M38	24
Rettaliata, J. T.—The Gas Turbine Part I	S41	20
Part II	D41	27
Part III	M42	26
Gas Turbine — Ready for Rails! Part I	D44	11
Part II	M45	20
Richardson, C. A.—Economics of Electric Power Pumping	J44	20
Richter, Walther—Taking Stock of Stored Energy in Magnetic Circuits	J44	15
Fundamentals of Automatic Controls — Part I	1Q47	26
Part II	2Q47	26
Is It Weight, Or Mass?	2Q48	31
Ringland, G. L.—Don't Lose Your Bearings!	D44	30
Robertson, A. D.—Selecting Shipboard Auxiliaries	D42	27
Robertson, C. A. — Reheat — Past, Present and Future	1Q49	9
Robinson, R. — From Candle Power to KW	1Q51	18
Rockwood, Charles — Solving the Shock Problem	1Q46	4
Rosenberg, L. T.—Telephone Interference and Alternator Wave Shape	J43	5
New Trends in Turbo-Generators	4Q50	4
Roth, H. H. — What Is Exciter Response?	3Q51	17
Hydro-Generators—Rugged Individualists	4Q51	22
Paralleling Synchronous Frequency Changers	2Q52	24
Royt, L. E.—Spectrography Speeds Scrap Salvage	J41	9
Rumble, F. H. — V-Belt Drive Fundamentals for Engineers	2Q51	30
Salzer, Dr. Erwin—Fundamental Problems of A-C Circuit Interruption	D44	24
Fundamentals of A-C Circuit Interruption — Part I	2Q48	20
Part II	3Q48	20
Part III	4Q48	18
Part IV	1Q49	28
Part V	2Q49	24
Part VI	3Q49	26
Analogies in AC Circuit Interruption	2Q52	26

	Issue	Page
Schoenig, L. W. — Frills Jump the Cost of Autotransformers	1Q48	4
Changing Taps Under Load	4Q48	8
Reactance Affects Transformer Design	2Q49	9
Trends in Power Transformer Application	3Q50	20
Schwartzburg, W. E. — Electrical Energy on Wheels	1Q47	4
Installing a Unit Substation	2Q47	24
The Single Circuit Sub	4Q47	10
System Trouble! Where? — Part I	3Q49	22
Part II	4Q49	20
Switchgear Control for Synchronous Motors	3Q51	20
Scott, D. B.—0.010—32 Gauge	S40	20
Scott, F. M. — Driving the World's Largest Water Tunnel	2Q50	10
Sealey, W. C. — Symmetrical Components Simplified — Part I	D36	32
Part II	J38	31
Simple Method of Calculating Transformer Temperature Rise with Variable Loads	D39	11
Transformer Teamwork	J40	28
Operation of a 25 Cycle Transformer at 60 Cycles	S40	30
Short Time Heating of Transformers	M41	24
Zero Sequence Impedance	J41	31
Mathematical Production Tools	S41	14
How to Increase Capacity of Old and New Transformers	D42	10
Cold Day—Overload Transformers	S43	26
Get the Most from Veteran Transformers This Easy Way	M44	20
A New View of Conversion Factors	J44	26
What A Power System Needs to Be "Effectively Grounded"	J45	28
Patents and Rights to Inventions	D45	27
What Is a "Bigger Transformer"?	4Q46	21
Testing Transformer Oils	1Q49	24
Push-Button Testing of Power Transformers	1Q50	10
Visualizing Transformer Impedances	2Q52	13
Paralleling Load Ratio Control Transformers	3Q52	30
Seely, K. B.—Landmarks in Oil Circuit Breaker Development	M43	11
A Half-Century of Oil Circuit Breakers	4Q49	4
Sellers, J. F.—Slow Speed Revolution	J40	20
Serota, R. M. — Induced Heat Rolls Up Its Sleeves	D45	10
Sillers, T. G. A. — Aerial Photography Trick Simplifies Switchgear Installation Engineering	S44	11
Silver, H. S.—Inventions for Sale	M38	21
What Would Compulsory Patent Licensing Mean to You?	S40	27
Patents and Rights to Inventions	D45	27
Sims, W. F.—Problems in the Design and Operation of a Large Metropolitan Electric System	J38	20
Skiba, R. — Design of Work Coils — Part I	4Q47	21
Part II	2Q48	11
Steidinger, D. K.—Putting the Conductor Where the Current Is	S43	9
Stein, H. J.—Forgings for Steam Turbine Rotors	D39	20
Steiner, R. — Methods of Closing and Tripping Circuit Breakers	4Q46	24
Stemmler, E. F.—Ball and Rod Mills and Their Motor Drives	M39	20
Stewart, O. V. — Repainting Transformers in the Field	4Q50	26
Stites, H. E. — Static Capacitors Boost Systems Pay Load	D45	31
Storm, H. F. — Mercury Arc Converter Masters Metals in Deep Heating	M45	7
Stowe, Ray — Switchgear Drawings Clarified	3Q52	20
Straub, C. — Switchgear Control for Synchronous Motors	3Q51	20
Stubbs, S. R. — Modernize Your Breakers?	J45	10
Sturtzen, C.—An Engineer Looks at World War II	M40	5
Tatum, Frank—Selecting Shipboard Auxiliaries	D42	27
Taylor, P. L.—"Breaker Operation, Please"	S41	28
Compact Breaker with Big Capacity	D43	24
Stem Voltage Floods On Circuit Breakers	S45	20
How Much Can a Breaker Take?	1Q52	4
Teasley, C. J. — New Blood for Old Switchgear	1Q50	28
Teplow, L.—Who Invented It?	J38	15
Patent Interference	D38	31
Joint Inventorship	J39	25
Terry, W. M., Jr. — Hermetically Sealed Transformers Are Here!	1Q50	4
Thompson, D. F. — Sound Absorption of Panels	3Q50	24
Timm, H. D. — Five Stages to Stability	3Q51	8
Rotating Regulators Control Systems Reactive Current	4Q51	4
Timmerman, J. S. — Packaged Bus Protects Electrical Conductors	1Q51	13
Tjensvold, R. O.—Preferred Numbers, Please!	1Q46	16
Tofte, A. R.—How Andrew Hallidie Flattened San Francisco's Hills	D41	10
It's a Dark Secret	J42	13
Trautman, C. E.—Oil for the Lamps of America	M42	5
Tray, S. E.—Water, Water Everywhere	M40	13
Treptow, Wm. H.—Making Ships Go	D43	30
Troxel, F. D. — High Lines in Rough Terrain	2Q52	4
Ureda, B. F. — Building the 300,000,000-Volt Betatron	2Q50	4
Wallace, H. A.—Order Out of Chaos	S41	9
"Slugged Arc"	J42	20
Warner, E. S. — The Voltor Diagram	2Q49	4
Watts, L. A. — Grouting — Part I	3Q47	21
Part II	4Q47	15
Part III	1Q48	20
Part IV	2Q48	30
Part V	4Q48	15
Wiederkehr, K. P.—Blowing Transformer Ratings Upward	S42	20
110 Kv on Wheels	3Q47	11
Williamson, G. V. — Fly-Ash Cleans Turbine Blading Faster	1Q48	25
Wilson, J. T. — Eclipse Reveals Solar Secrets	S45	4
Wolfe, J. M.—Power for Portland Cement Part I	J42	5
Part II	S42	25
Woodruff, L. S. — Loading Evaluation of Transformers	2Q50	27
Wright, H. A.—Low Voltage Release, Low Voltage Protection	J40	16
Overload Protection for A-C Motors	D40	16
Zierold, W.—Know Your Patents	M39	27

Page

24

20

26

31

7
20

20
10

5
27
28
24
20
4

28
15
31
25

4

24
8

4

13
16

10
13
5
13
30
4

4
9
20
4

21
15
20
30
15

20
11

25
4

5
25

27

16
16
27